Software Product Description

PRODUCT NAME: HP DECprint Supervisor (DCPS) for OpenVMS, Version 2.7 **SPD 44.15.20**

DESCRIPTION

HP DECprint Supervisor (DCPS) for OpenVMS is a layered software application that provides access to selected PostScript printers. DCPS runs on OpenVMS Integrity servers, OpenVMS Alpha systems and OpenVMS VAX systems.

DCPS drives selected PostScript printers and supports these printers' special features, such as tray and media selection and two-sided printing. File formats supported include PostScript, ANSI-Compliant DIGITAL Printing Protocol Level 3 (DEC PPL3) and HP PCL. DCPS also includes features such as number-up, layup, automatic data type detection and high speed image printing, plus translators for a number of printer languages. See the *Other Hardware Required* section of the SPD for the list of supported printer models.

DECprint Supervisor software consists of the following components:

- A print symbiont that processes print requests for the host on which it resides.
- Software to transmit the request and associated data over the following protocols:
  - — Ethernet via TCP/IP to a printer with a network interface card (NIC) that supports the bidirectional Raw TCP/IP socket protocol or LPD protocol
  - — Ethernet via TCP/IP to a printer connected to a print server or a terminal server that supports the bidirectional Raw TCP/IP socket protocol or LPD protocol
  - — Ethernet via TCP/IP to a remote LPD queue on another system
  - — Ethernet to a PrintServer printer via DECnet or TCP/IP using Common Printer Access Protocol (CPAP)
  - — Local Area Transport (LAT)
  - — USB connection
  - — Serial line
- Translators to convert various non-PostScript files into the PostScript language for printing.
- Page formatting capabilities such as the ability to print multiple page images on a single side of a sheet of paper and to specify borders, margins and page offsets.
- A series of PostScript tools for application developers. These include a PostScript error handler and Font Encoding Vectors for the ISO Latin Alphabet Number 1 (ISO 8859/1) and DIGITAL Multinational Character Set for use with all the PostScript text fonts that are built into DIGITAL and selected Compaq PostScript printers.

Install DECprint Supervisor software on each node that has print queues for PostScript printers.

A system running DECprint Supervisor software can transmit print requests to printers on a TCP/IP, DECnet or LAT network. Note that not all printers support all these protocols.

To communicate with a printer on a TCP/IP network, HP TCP/IP Services for OpenVMS software, Process Software MultiNet for OpenVMS or Process Software TCPware for OpenVMS software must be installed on your system.

For DIGITAL PrintServer printers, whether using the TCP/IP or DECnet protocol, PrintServer Software must be installed on at least one system in your network.

Printing Features

- PostScript printing. The print symbiont passes PostScript files directly to the printer. DECprint Supervisor does not interpret or translate PostScript files. Therefore, they must be created using standard PostScript Level 1, Level 2 or Level 3 operators as defined within the printer itself.
- ANSI (DEC PPL3) printing. DECprint Supervisor translates ANSI files into PostScript for printing on the output device. These ANSI files may contain ASCII text, sixel graphics and other features of HP's ANSI-compliant Printing Protocol Level 3.
- Selection of input tray via INPUT_TRAY, MEDIA_TYPE, PAGE_SIZE or SHEET_SIZE parameters and output tray via OUTPUT_TRAY, within the limitations of the printer and the tray-naming conventions to provide such features.
- Rotation of the page via the PAGE_ORIENTATION parameter for non-PostScript files only.
- Selection of single-sided, double-sided, or tumble printing when available on the printer, via the SIDES parameter.
- Formatting of ANSI text files via the /HEADER, /FORM, /SPACE and /FEED qualifiers and the TAB parameter.
- Control of ANSI file margins, page setup and wrap or truncate options as specified by the DEFINE/FORM command.
- Status and error messages sent to the user's terminal, may be printed on the job trailer page or job log page, written to a log file, or displayed on the operator's console.
- Use of device control modules for basic data types via the /SETUP qualifier. PostScript modules may contain any PostScript operators supported by the printer in the printing context.
- Collection of accounting information for each print job as follows: sheets of paper printed, the number of RMS Gets and the number of QIO Writes. All Compaq, DIGITAL and GENICOM printers support this feature except where noted in the *Other Hardware Required* section of the SPD. This feature may not be available with other printers.
- Access to the PCL interpreter native to selected printers. Printers for which the native PCL interpreter is supported are listed in the *Other Hardware Required* section of the SPD.
- Support for printers via network interface cards, print servers and terminal servers that support bidirectional Raw TCP/IP sockets or LPD.
- Support for printers via remote LPD queues on other systems.
- Support for PrintServer printers on DECnet or TCP/IP interconnects using CPAP protocol.
- Automatic data type detection and switching. The software attempts to determine the data type of the file. If successful, it will automatically translate, if necessary, and print the file. If it cannot determine the file data type, it will use the default data type defined by DATA_TYPE=AUTOMATIC.

  If the file is printed using the data type defined by DATA_TYPE=AUTOMATIC, the symbiont will look for a switch to PostScript command (%!) and continue to process the rest of the file as PostScript. This switch may occur only once per file. The switch to PostScript feature is not available when DCPS uses a printer's native PCL interpreter to process the file.
- Printing non-PostScript data types on the PostScript printer. Translators are provided to translate the following data types into PostScript for printing:
  - DDIF (bitonal Image subset only; requires DECwindows Motif software)
  - PCL Level 4 (as implemented on the HP LaserJet IID)
  - IBM Proprinter XL24
  - ReGIS (monochrome output only)
  - Tektronix 4010/4014
  - ASCII LIST translator that formats and numbers ASCII files. This translator numbers each line of text, creates alternating bars of gray and white in the background and creates a running head of the file name and page number.
- Printing two or more page images on a single side of a sheet via the NUMBER_UP parameter.
- Specifying page layup features via the LAYUP_DEFINITION parameter. Page layup features include Borders, Margins, Margin Alternation, Pages Per Sheet, First Page, Page Order and Page Grid. Layup definition options may be provided directly, as arguments to the LAYUP_DEFINITION parameter, or indirectly, as the contents of a file specified by that parameter.
- Specifying a range of pages of the file to be printed via the PAGE_LIMIT parameter.
- Printing jobs with finishing options with the PUNCH and STAPLE parameters, on supported printers equipped with such options.

- Automatically scaling a page created for one paper size so that it fits on a different paper size via use of both the PAGE_SIZE and SHEET_SIZE parameters on the same print command.
- Printing multiple uncollated copies of each sheet via the SHEET_COUNT parameter.
- Use of device control modules for all data types via the /SETUP qualifier. ANSI modules may include control sequences. PCL modules may include binary font data.
- Support for OpenVMS autostart queues, simplifying startup and ensuring high availability of print queues.

ANSI (DEC PPL3) Emulation

Printing of ANSI text and sixel graphics is compatible with DIGITAL's ANSI-compliant PPL3 printers.

Note: PostScript printers differ in the amount of virtual memory they have available for printing and font storage. Files that require downloading of fonts may be printed differently, may print more slowly or may fail to print on some printers.

INSTALLATION STATEMENT

HP recommends that a customer's first purchase of this software product include HP Installation Services. These services provide for installation of the software product by an experienced HP Software Specialist.

For subsequent purchases of this product, only customers with knowledge of OpenVMS generic and execution print queues in clustered and non-clustered environments and, if operating in a DECserver environment, knowledge of DECserver management, should attempt installation of this software product. HP recommends that all other customers purchase HP's Installation Services.

These services provide for the installation of the software product and HP PostScript Printer hardware by an experienced HP Specialist.

Before installation of the software by HP Installation Services, the customer must:

- Obtain, install and demonstrate as operational any equipment and facilities necessary to interface to HP's communication equipment.
- Make available for a reasonable period of time, as mutually agreed upon by HP and the customer, all hardware, communication facilities and terminals that are to be used during installation.
- For verification of installation and connectivity in a multi-node node network, designate and provide access to a host that has previously been installed by HP.
- Assure that a valid OpenVMS operating system license is installed.

Delays caused by any failure to meet these responsibilities will be charged at the then prevailing rate for time and materials.

Installation of DECprint Supervisor software will consist of the following:

- Verification that all prerequisite software and hardware has been installed.
- Verification that a complete set of DCPS software media and documentation has been received.
- Verification that all hardware and software prerequisites have been met and the equipment is operational.
- Installation of DCPS software on one system.
- Verification that DCPS software has been correctly installed by running the Installation Verification Procedure (IVP).
- Modification of the DECnet database or TCP/IP hosts file to add printer node names and addresses.
- Modification of the OpenVMS start-up files to automate the start-up of print queues.

HARDWARE REQUIREMENTS

Processors Supported

For information about support processors, refer to the Software Product Description for the OpenVMS Operating System (SPD 25.01.xx and 82.35.xx).

Other Hardware Required

At least one PostScript printer, as follows:

- Apple

  LaserWriter IIg
  LaserWriter IIf [1]
  LaserWriter II NT [1]
  LaserWriter II NTR [1]
  LaserWriter II NTX [1]
  LaserWriter Plus [1]
  LaserWriter Pro 600 [1]
  LaserWriter Pro 630 [1]

- Compaq

  Laser Printer LN16 [2]
  Laser Printer LN32
  Laser Printer LNC02 [3]
  Laser Printer LNM40

[1] Printer does not have native PCL interpreter

[2] Supported only when the printer is in PostScript mode

[3] Does not support DCPS accounting feature

- DIGITAL

  Colormate PS (LF01R) [1]
  Colorwriter LSR 2000 and 2000+ (LNC01) [1]
  DECcolorwriter 1000 (LF02) [1]
  DEClaser 1150 (LN07R) [1]
  DEClaser 1152 (LN07C) [1]
  DEClaser 2150 (LN05R) [1]
  DEClaser 2250 (LN06R) [1]
  DEClaser 3250 (LN08R) [1]
  DEClaser 3500 (LN14) [4]
  DEClaser 5100 (LN09) [4]
  Laser Printer LN15 [2]
  Laser Printer LN15+ [2]
  Laser Printer LN17+ps
  Laser Printer LN20 [3]
  Laser Printer LN40 [3]
  Laser Printer LNC02 [3]
  LN17ps
  PrintServer 17 (LPS17)
  PrintServer 17/600
  PrintServer 20 (LPS20) [1]
  turbo PrintServer 20 [1]
  PrintServer 32 (LPS32) [1]
  PrintServer 32 plus
  PrintServer 40 (LPS40) [1]
  PrintServer 40 Plus [1]
  ScriptPrinter (LN03R) [1]

- GENICOM

  Intelliprint cL160
  Intelliprint mL260
  Intelliprint mL402
  Intelliprint mL450
  LN21
  LN28
  LN45
  LNM40
  microLaser 170 [2]
  microLaser 210
  microLaser 280
  microLaser 320
  microLaser 401

- HP

  9085 MFP [5]
  CM8050 Color MFP
  CM8050 Color MFP with Edgeline
  CM8060 Color MFP
  CM8060 Color MFP with Edgeline
  Color LaserJet 2500
  Color LaserJet 2550
  Color LaserJet 2605
  Color LaserJet 3000
  Color LaserJet 3700
  Color LaserJet 3800
  Color LaserJet 4500
  Color LaserJet 4550
  Color LaserJet 4600
  Color LaserJet 4610
  Color LaserJet 4650
  Color LaserJet 4700
  Color LaserJet 4730 MFP
  Color LaserJet 5500
  Color LaserJet 5550
  Color LaserJet 8500 [6]
  Color LaserJet 8550 [6]
  Color LaserJet 9500
  Color LaserJet 9500 MFP
  Color LaserJet CM1015 MFP
  Color LaserJet CM1017 MFP
  Color LaserJet CM1312 MFP
  Color LaserJet CM2320 MFP
  Color LaserJet CM3530 MFP
  Color LaserJet CM4730 MFP
  Color LaserJet CM6030 MFP
  Color LaserJet CM6040 MFP
  Color LaserJet CP1513
  Color LaserJet CP1514
  Color LaserJet CP1515
  Color LaserJet CP1516
  Color LaserJet CP1517
  Color LaserJet CP1518
  Color LaserJet CP1519
  Color LaserJet CP2024
  Color LaserJet CP2025
  Color LaserJet CP2026
  Color LaserJet CP2027
  Color LaserJet CP3505
  Color LaserJet CP3525
  Color LaserJet CP4005
  Color LaserJet CP6015
  LaserJet 1300
  LaserJet 1320
  LaserJet 2100
  LaserJet 2200
  LaserJet 2300
  LaserJet 2410
  LaserJet 2420
  LaserJet 2430
  LaserJet 3052
  LaserJet 3055
  LaserJet 3390
  LaserJet 3392
  LaserJet 4000
  LaserJet 4050
  LaserJet 4100
  LaserJet 4100 MFP
  LaserJet 4200
  LaserJet 4240

[4] Includes support for direct printing to native PCL interpreter only when printer is in autosensing mode

[5] Raw TCP only

[6] LPD and AppleTalk only

LaserJet 4250
LaserJet 4300
LaserJet 4345 MFP
LaserJet 4350
LaserJet 4M
LaserJet 4M Plus
LaserJet 4ML
LaserJet 4MP
LaserJet 4MV
LaserJet 4SiMX
LaserJet 5000
LaserJet 5100
LaserJet 5200
LaserJet 5M (monochrome version)
LaserJet 5SiMX
LaserJet 8000
LaserJet 8100
LaserJet 8150
LaserJet 9000
LaserJet 9000 MFP
LaserJet 9040 MFP
LaserJet 9050
LaserJet 9050 MFP
LaserJet 9055 MFP
LaserJet 9065 MFP
LaserJet III with PostScript (Level 1) cartridge [1]
LaserJet III with PostScript-Plus (Level 2) cartridge [1]
LaserJet IIID with PostScript (Level 1) cartridge [1]
LaserJet IIID with PostScript-Plus (Level 2) cartridge [1]
LaserJet IIISi with PostScript (Level 1) option
LaserJet IIISi with PostScript (Level 2) option
LaserJet M1522 MFP
LaserJet M2727 MFP
LaserJet M3027 MFP
LaserJet M3035 MFP
LaserJet M4345 MFP
LaserJet M5025 MFP
LaserJet M5035 MFP
LaserJet M9040 MFP
LaserJet M9050 MFP
LaserJet P2015
LaserJet P2055
LaserJet P3004
LaserJet P3005
LaserJet P3011
LaserJet P3015
LaserJet P4014
LaserJet P4015
LaserJet P4515
PaintJet XL300 [1]

- IBM

  Infoprint 21
  InfoPrint 32
  InfoPrint 40

- Lexmark

  C720
  C750
  C910
  Optra C710
  Optra Rt+ [1]
  Optra S 1250
  Optra S 1255
  Optra S 1620
  Optra S 1625
  Optra S 1650
  Optra S 1855
  Optra S 2420
  Optra S 2450
  Optra S 2455
  Optra Se 3455
  Optra T610
  Optra T612
  Optra T614
  Optra T616
  Optra W810
  T520
  T522
  T620
  T622
  W820

- Ricoh

  Aficio 3035 [6] [7]
  Aficio 3045 [7]
  Aficio 3235C [6] [7]
  Aficio AP400N [6] [7]
  Aficio AP410N [6] [7]
  Aficio AP4510 [6] [7]
  Aficio CL3500N [6] [7]
  Aficio CL4000DN [6] [7]
  Aficio CL7000 [6] [7]
  Aficio CL7100 [6] [7]
  Aficio CL7200 [6] [7]
  Aficio CL7300 [6] [7]
  Aficio MP 161 [6] [7]
  Aficio MP 2510 [6] [7]
  Aficio MP 3500 [6] [7]
  Aficio MP 4500 [6] [7]
  Aficio MP 5500 [6] [7]
  Aficio SP 8100DN [6] [7]
  Aficio SP C410DN [7]
  Aficio SP C411DN [7]
  Aficio SP C811DN [6] [7]

- Tektronix

  Phaser 200e [1]
  Phaser 200i [1]
  Phaser 220e [1]
  Phaser 740 [1]

[7] Optional finishers and mailboxes not supported

Phaser 750 [1]
Phaser 780 [1]
Phaser 850 [1]

- Xerox

DocuPrint N2025
DocuPrint N2125
DocuPrint N24
DocuPrint N2825
DocuPrint N32
DocuPrint N3225
DocuPrint N40
DocuPrint N4025
DocuPrint N4525
Phaser 4500 [6]
Phaser 4510 [6]
Phaser 5500 [6]
Phaser 6250 [6]
Phaser 7300 [6]
Phaser 7750 [6]
Phaser 8400 [6]
WorkCentre Pro 232 [6]
WorkCentre Pro 238 [6]
WorkCentre Pro 245 [6]
WorkCentre Pro 255 [6]
WorkCentre Pro 265 [6]
WorkCentre Pro 275 [6]
WorkCentre Pro 35 [6]
WorkCentre Pro 45 [6]
WorkCentre Pro 55 [6]
WorkCentre Pro 65 [6]
WorkCentre Pro 75 [6]
WorkCentre Pro 90 [6]
WorkCentre Pro C2128 [6]
WorkCentre Pro C2636 [6]
WorkCentre Pro C3545 [6]

A supported printer must be equipped with one or more of the following supported interconnects:

- Ethernet port or Network Interface Card (NIC) supporting CPAP, LAT, bidirectional Raw TCP/IP socket or LPD protocol
- EIA-232 (RS-232) serial port
- EIA-422 (RS-422) serial port
- Bidirectional Centronics parallel port connected through a print server or terminal server

Note: DCPS does not support the following types of printer connections:

— A unidirectional connection (for example, a parallel or Raw TCP/IP port that is unidirectional)

— The parallel port on an OpenVMS system

— The Telnet network protocol

The following notes apply when using the above interconnects:

- EIA-232 serial interfaces are optional with some printers and may need to be purchased separately.
- EIA-422 serial interfaces, such as that employed on the HP PaintJet XL300, require an EIA-422/EIA-232 converter/adapter.
- The HP LaserJet 4SiMX is supported for serial communication when equipped with the Extend Systems ESI-2633A interface card.
- Ethernet interfaces may require an adapter to connect the printer's Ethernet hardware to that of the local area network.
- Ethernet protocols supported for certain Desktop and Workgroup printers (not including PrintServer printers) are Raw TCP/IP socket, LPD and LAT.
- Ethernet protocols supported for DIGITAL PrintServer printers are DECnet CPAP and TCP/IP CPAP.

For TCP/IP configurations, the following are required:

- At least one printer (listed above)
- A NIC, print server or terminal server that provides bidirectional Raw TCP/IP sockets or LPD.

A cable may also be required to connect the printer to a print server or terminal server.

For Serial Line configurations, the following are required:

- At least one printer (listed above)
- Serial interface and cable for EIA-232 or EIA-422 with converter/adapter
- One of the following serial interfaces or servers:
  — CVAX serial interface (CXA16, CXB16, CX08, DZQ-11; 9600 baud)
  — DHV11 (9600 baud; serial interface)
  — DZQ11 (9600 baud; serial interface)
  — DLV11 (9600 baud; serial interface)
  — DHU11 (9600 baud; serial interface)
  — DMZ32 (4800 baud; serial interface)
  — DMF32 (9600 baud; serial interface)
  — DMB32 (9600 baud; serial interface)
  — DECserver 90L and 90L+ (38.4K baud; LAT)
  — DECserver 90M (57.6K baud; LAT and raw TCP/IP socket)
  — DECserver 90TL (57.6K baud; LAT and raw TCP/IP socket)
  — DECserver 100 (9600 baud; LAT)

- — DECserver 200/MC (19.2K baud; LAT)
- — DECserver 250 (19.2K baud; LAT)
- — DECserver 300 (19.2K baud; LAT
- — DECserver 500 (9600 baud; LAT)
- — DECserver 550 (9600 baud; LAT)
- — DECserver 700 series (115.2K baud; LAT and raw TCP/IP socket)
- — DECserver 900 series (115.2K baud; LAT and raw TCP/IP socket)
- — MUXserver 100 (19.2K baud; LAT)
- — MUXserver 300 (19.2K baud; LAT)
- — NetRider 90 - see DECserver 90M
- — NetRider 900 - see DECserver 900 series
- — LATprint (38.4K baud; LAT)
- — RapidPrint 200 (115.2K baud; LAT)

A DECserver or NetRider configuration requires DECserver Network Access Software (DNAS) V2.0 or later and a minimum of 4 Mbytes of memory to support Raw TCP/IP sockets.

All of the interfaces above support EIA-232 and some support EIA-422. The customer must select an appropriate combination of host serial interface, cable and printer serial interface. In some cases, an external adapter may be required. Also:

- The printer's communications interface must be set for 8-bit, no parity communication.
- The interface baud rate must be set to a value less than or equal to the value specified above for the chosen host interface.
- Flow control should be set to XON/XOFF for PostScript-only printers or DTR/CTS (hardware handshake) for PostScript/PCL 5 printers.

For parallel port configurations, the following are required:

- At least one printer (listed above)
- Bidirectional Centronics parallel port interface
- One of the following print servers:
  - — DIGITAL RapidPrint 200 (LAT)
  - — DIGITAL RapidPrint 500 (Raw TCP/IP socket, LPD and LAT)
  - — GENICOM MPS100 (Raw TCP/IP socket, LPD and LAT)
  - — HP JetDirect (Raw TCP/IP socket and LPD)

A parallel cable may also be required to connect the printer to the print server.

Disk Space Requirements:

Table 1 shows the approximate disk space, in blocks, required by DCPS on the system disk. Actual disk usage may vary depending on the user's system environment, system disk cluster size, configuration and software options.

Table 1
Disk Space Requirements

	OpenVMS I64	OpenVMS Alpha	OpenVMS VAX
During Installation	11,500	8,200	7,700
Permanent	11,000	7,700	7,200

SOFTWARE REQUIREMENTS

DECprint Supervisor (DCPS) for OpenVMS Version 2.7 software runs on the following versions of the OpenVMS operating system:

- OpenVMS I64 V8.2-1, V8.3 and V8.3-1H1
- OpenVMS Alpha V6.2, V7.3-2, V8.2 and V8.3
- OpenVMS VAX V5.5-2, V6.2 and V7.3

However, only specific versions of networking software are supported for each version of the operating system. See the following sections for the supported versions.

TCP/IP Configurations

For TCP/IP configurations, you need one of the following TCP/IP products:

- HP TCP/IP Services for HP OpenVMS
- Process Software MultiNet for OpenVMS
- Process Software TCPware for OpenVMS

See Table 2 for supported versions of HP software.

Table 2
Supported Network Software Versions

OpenVMS	TCP/IP Services	DECnet	DECnet-Plus
I64 V8.2	V5.5, V5.6	V8.2	V8.2
I64 V8.2-1	V5.5, V5.6	V8.2-1	V8.2-1
I64 V8.3	V5.6	V8.3	V8.3
I64 V8.3-1H1	V5.6 ECO 2	V8.3-1H1	V8.3-1H1
Alpha V6.2	V4.2	V6.2	V6.3
Alpha V7.3-2	V5.3, V5.4	V7.3-2	V7.3-2
Alpha V8.2	V5.5, V5.6	V8.2	V8.2
Alpha V8.3	V5.6	V8.3	V8.3
VAX V5.5-2	V4.0	V5.5-2	––
VAX V6.2	V4.2	V6.2	V6.3
VAX V7.3	V5.1, V5.3	V7.3	V7.3

PrintServer Printer Configurations

For PrintServer printer configurations, you need a supporting host and PrintServer Software V4.0 or later.[8] Refer to the PrintServer Software SPD 48.09.xx for more information.

You also need one of the following products:

- HP DECnet for OpenVMS
- HP DECnet-Plus for OpenVMS
- HP TCP/IP Services for OpenVMS
- Process Software MultiNet for OpenVMS
- Process Software TCPware for OpenVMS

See Table 2 for supported versions.

DDIF image printing

- DECwindows Motif software

[8] This product has been retired.

SOFTWARE LICENSING

This software is furnished under the licensing provisions of Hewlett-Packard Company's Standard Terms and Conditions. For more information about HP's licensing terms and policies, contact your reseller, VAR or local HP office.

DECprint Supervisor for OpenVMS

The right to use DECprint Supervisor for OpenVMS is included with the Foundation Operating Environment (FOE) for OpenVMS I64, and with the license for the OpenVMS Alpha and OpenVMS VAX operating systems.

This right permits execution of the DECprint Supervisor for OpenVMS software on any Integrity, Alpha or VAX system for the purposes of controlling and providing basic printing features for all PostScript printers controlled by the licensed system.

The *Hardware Requirements* section of this SPD lists the supported printers. Supported printers have been tested and verified to work. HP makes no representation relative to the use of this product with PostScript devices not listed in the SPD. Customers' use of the product with PostScript devices not listed in the SPD is at their own risk.

CLUSTER ENVIRONMENT

This layered product is fully supported when installed on any valid and licensed OpenVMS Cluster[9] configuration without restrictions. The *Hardware Requirements* section of this SPD details hardware required by this product.

OpenVMS Tailoring

The following OpenVMS classes are required for full functionality of this layered product:

- OpenVMS Required Saveset
- Network Support (for PrintServer support) [10]
- Secure User's Environment
- Utilities (for support of DECserver connected printers) [10]
- DECwindows Application Files (for printing DDIF encoded bitonal images) [10]

For more information on OpenVMS classes and tailoring, refer to the appropriate OpenVMS Operating System Software Product Description.

[9] OpenVMS Cluster configurations are fully described in the OpenVMS Cluster Software Product Description (42.18.xx) and include CI, Ethernet, DSSI and SCSI configurations.

[10] These are optional features. Installations that do not use these features do not need to install the tailoring classes indicated.

OPTIONAL SOFTWARE

- Distributed Queuing Service for OpenVMS (DQS) (SPD 28.80.xx)
- DECnet-Plus for OpenVMS I64 or Alpha (SPD 50.45.xx) or DECnet-Plus for OpenVMS VAX (SPD 25.03.xx) when DECnet is used as the communication protocol to PrintServer printers.
- HP TCP/IP Services for HP OpenVMS (SPD 46.46.xx) when TCP/IP is used as the communication protocol to PrintServer printers and to printers with NICs and print servers and terminal servers that support Raw TCP/IP socket or LPD protocols.
- Process Software MultiNet for OpenVMS when TCP/IP is used as the communication protocol to PrintServer printers and to printers with NICs and print servers and terminal servers that support Raw TCP/IP socket or LPD protocols.
- Process Software TCPware for OpenVMS when TCP/IP is used as the communication protocol to PrintServer printers and to printers with NICs and print servers and terminal servers that support Raw TCP/IP socket or LPD protocols.

GROWTH CONSIDERATIONS

The minimum hardware/software requirements for any future version of this product may be different from the requirements for the current version.

DISTRIBUTION MEDIA

DCPS software is available for OpenVMS I64 on the FOE DVD, and OpenVMS Alpha and VAX on the Software Product Library CDs.

DCPS documentation is available as part of the OpenVMS I64, Alpha and VAX Online Documentation Libraries.

SOFTWARE PRODUCT SERVICES

A variety of service options are available from HP. For more information, contact your HP reseller or local HP office.

SOFTWARE WARRANTY

This software is provided by HP with a ninety-day conformance warranty in accordance with the HP warranty terms applicable to the license purchase.

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